



December 18, 2006

Pamela Creedon - Executive Officer
Central Valley Water Quality Control Board (Region 5)
11020 Sun Center Dr. Suite 200
Rancho Cordova, CA 95670-6114

Re: Tentative Order - WDRs for Dairies

Dear Ms Creedon and Board Members:

Attached are comments submitted by Sustainable Conservation on the Tentative Order Waste Discharge Requirements for Dairies.

Please feel free to contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Allen J. Dusault".

Allen J. Dusault
Program Director

Cc: Polly Lowry, Dairies Permitting

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Sustainable Conservation comments on the draft WDR

General Order for Existing Milk Cow Dairies (11/22/06)

Prepared by Allen Dusault, Program Director - *Submitted on (12/06)*

Sustainable Conservation is grateful for the opportunity to submit comments to the California Regional Water Quality Control Board – Central Valley Region. There are a couple of general and several specific comments. General observations are as follows:

The tentative WDR is an important and timely document that addresses the water quality issues associated with California's dairy milk production. Surface and groundwater impacts have long been a concern of many in the environmental community and for too long there has not been adequate regulatory oversight to address these issues. That has changed in recent years as the result of increased attention and enforcement by the State and Regional Water Boards, as well as actions and new permit requirements by the EPA and local jurisdictions. The dairy industry has also played a significant role as they have been instrumental in providing assistance to their membership to improve regulatory compliance. There have been many other stakeholders who have participated in this change, most notably the partnership of the California Dairy Quality Assurance Program (CDQAP) of which we are a member. This program, perhaps more than any other voluntary environmental stewardship program engaging agriculture, has played a crucial role in improving the dairy industries environmental performance in California.

This long awaited WDR General Order takes the level of regulatory oversight much further, particularly in its focus on groundwater impacts from dairy waste. We believe this is an appropriate focus. However, for this Order to be as successful, there are some recommendations we propose to improve its effectiveness while maintaining a viable and healthy dairy industry in California, the number one dairy producing state in the nation.

A first concern is a general one relating to the consequences of implementation of this General Order. California's dairy industry has become increasingly concentrated into fewer and larger farms. We are concerned that this trend will be exacerbated by the requirements of the WDR. Most of the remaining small dairies in California will have difficulty complying with all the new demands that will be placed on them. While we strongly support efforts to reduce and reverse ground and surface water impacts, the current approach lacks the flexibility that may be necessary to address the diversity of dairies in California and their ability to comply with all provisions of the WDR. Smaller operations, or those dairies in lower risk areas, which can have smaller environmental footprints, would be better served by providing alternative compliance mechanisms and timetables. Though there is some recognition in the draft WDR of different levels of risk or impact associated with the diversity of dairies in the Central Valley, for the most part these factors are not adequately factored into the General Order. Because there are, and always will be, limitations on RB-5 staffing and their ability to direct compliance, a more targeted approach would permit resources to be leveraged for maximum benefit. This would also allow prioritization of dairies with greatest ground and surface water impacts.

Another issue is how different sources of groundwater impact from dairies are handled by the Order. Among scientist and engineers looking at water quality issues on dairies, there is emerging consensus about where the most significant groundwater impacts are coming from. Experts from agronomy, hydrogeology and engineering disciplines appear to agree that the manure storage ponds are probably not the area where the greatest focus is warranted. However, the Order seems to prioritize this aspect of dairy operations and, as a result, disproportionately requires resources be directed to dairy ponds/lagoons. We are in support of new standards that better define how dairies can achieve compliance and recognize the need to improve pond performance. But the draft Order's disproportionate emphasis on retention ponds could result in slower improvement/mitigation of water quality impacts from other areas of dairies, particularly crop fields and corrals.

One other observation related to this is the impact the Order could have on progressive dairies engaged in innovative management practices. New technologies and practices appear to be disadvantaged under this WDR as "change" of almost any type, introduces a higher level of regulatory scrutiny. This discourages innovation and new technologies which are needed if we are to solve the water quality problems coming from dairies. It is also our experience that any time a new approval is required, there are significant delays in gaining that approval from RB-5 and that approval time frames usually extend over months but sometimes even years. Obtaining approval for methane digesters is a recent example. We have promoted their use on dairies but over the last two years have been hard pressed to get any new ones approved by RB-5. The result has been a negative impact on air quality and on reductions in greenhouse gas emissions, environmental issues that RB-5 should be concerned about. But the consequences of RB-5 actions (or inactions) outside of water quality realm appear not to have not been factored into its regulatory oversight. The perception is that RB-5 has not yet taken "on the ground" ownership of cross media impacts or in the delays that more oversight entails. The draft WDR Order reinforces the likelihood that innovations that are necessary to improve water (and air) quality will continue to be unintentionally discouraged. Provisions that accelerate adoption of novel management practices and technologies should be included and encouraged as part of the WDR. Rewarding and not inadvertently punishing dairies that are early adopters would seem consistent with RB-5 staff statements. And training staff on how to make this happen, though unusual, is not antithetical to RB-5 objectives.

Specific comments are as follows:

As good as it sounds on paper monitoring wells on individual dairies are not a good way to get reliable information on what is happening with groundwater quality. Almost any reputable hydrologist will tell you, you need to look at groundwater on a more macro scale. Local gradients from pumping, variability of local stratigraphy, off site incursion, discontinuous aquifers and other factors make on site wells problematic as indicators of groundwater quality. It is preferable that an area/region wide approach to groundwater monitoring be implemented. Using this model, well locations would be determined by a groundwater hydrologist across dairy property lines so that more accurate and defensible representations of groundwater quality are achieved. However, this will likely require more innovative thinking by RB-5 staff and cooperation within dairy clusters. Ultimately this will give RB-5 much better data, provide it faster and at lower cost of monitoring.

There is a requirement that dairy ponds be rebuilt with a liner if groundwater monitoring shows elevated levels of contaminants per water quality criteria. For reasons stated above, the existing approach to monitoring will not demonstrate this in a manner that is conclusive or legally defensible. Groundwater below or nearby ponds will almost certainly be impacted by surrounding fields, corrals or solid manure storage areas. The monitoring wells will likely not differentiate these impacts. Also, this is a tremendously expensive undertaking that will divert resources from changing nutrient land application practices (where the contents of the ponds are recycled). There is also a significant risk that doing the pond excavation and reconstruction work will actually increase nitrate leaching as previously covered areas are exposed when the ponds are reconstructed. The opportunity cost of focusing on ponds is also significant and misses the central source of groundwater impact, namely the fields. It is fair to require new pond construction to meet new standards but ponds built to the previous should not be encumbered with this requirement. The waste management field has some analogy. Solid waste landfills have to meet stringent liner requirements but the Integrated Waste Management Board did not make landfill operators go back and remove waste from existing landfills and rebuild the liner system. Not only is it expensive but it risks increasing groundwater contamination.

A third point relates to demands on manure management. Under the tentative Order, the dairymen will be required to handle manure analogous to the manifest system used for hazardous waste. This is a bad idea. Dairymen need to be able to sell or give away manure without RB-5 approval or going through a tracking or documentation system of its fate (one exception might be to insure pathogen reduction). Manure is an organic fertilizer and RB-5 should encourage its export. As now construed, the WDR will have the effect of discouraging the export of manure. Why treat dairy manure differently than commercial fertilizer? The likely net affect will be a shift to using more chemical fertilizer. That is the opposite direction we should be going. RB-5 may want to factor in the practical result of its manure requirements and how dairymen will logically respond.

The Order specifies tailwater monitoring – something long overdue. Tailwater is found on many dairies (and from many other farm fields). However, salinity is likely to be a daunting challenge. There are no good current options for removing salt. The problem is regional in scope. And so should be the solution. It is recommended that RB-5 take the initiative in helping to develop regional approaches to addressing salinity. There are significant technical challenges to removing salts and some interesting research that shows some promise. However, the barriers are not only technical in nature but often regulatory. Solutions must integrate the regulatory objectives of different agencies.

As a final comment, the Order has a specific provision designed to prevent dairy waste from contaminating groundwater and surface water (i.e. page 15, #4). Similar specific limitations on commercial fertilizer are not included. If the intent of the regulations is to improve water quality, shouldn't there be uniform or balanced treatment of both nutrient sources for crops. The way the current draft WDR requirements are written, manure is at a disadvantage. As such, commercial fertilizer may become the preferred source of crop nutrients. And that may be the worst outcome not only water quality but for greenhouse gas emission (from N₂O) and energy use (nitrogen fertilizer is made from natural gas).